

CLAIMS

1. (Currently Amended) An implantable medical graft, comprising:

- a. a generally tubular body member comprising a film selected from the group consisting of metallic and pseudometallic materials and having a luminal wall surface, an abluminal wall surface and a wall thickness intermediate the luminal wall surface and the abluminal wall surface;
- b. at least a portion of the body member having a plurality of circumferential corrugations defined by a radially undulating pattern of longitudinally alternating radially extending peaks and valleys in the abluminal wall surface of the body member and a radially undulating longitudinally alternating pattern of radially extending peaks and valleys in the luminal wall surface of the body member, wherein each peak in the luminal surface is longitudinally coincident with each peak in the abluminal surface and each valley in the luminal surface is longitudinally coincident with each valley in the abluminal surface, wherein a plurality of microperforations is disposed through the ~~portion of the body member between the~~ wall thicknesses composing the coincident peaks and the wall thicknesses composing the coincident valleys; and
- c. at least one of a plurality of non-undulating circumferential regions positioned at end regions of the body member.

2. (Previously Presented) The implantable medical graft according to Claim 1, wherein at least one of a plurality of suturing openings is disposed through the wall thickness of the at least one of the plurality of non-undulating regions of the body member.

3. (Original) The implantable medical graft according to Claim 1, wherein the film is made of a metallic material selected from the group consisting of titanium, vanadium, aluminum, nickel, tantalum, zirconium, chromium, silver, gold, silicon, magnesium, niobium, scandium, platinum, cobalt, palladium, manganese, molybdenum and alloys thereof.

4-5. (Previously Cancelled)

6. (Previously Presented) The implantable medical graft according to Claim 2, wherein the wall thickness of the circumferential corrugations is less than the wall thickness of the non-undulating regions.

7. (Previously Presented) The implantable medical graft according to Claim 6, wherein the thickness of the circumferential corrugations is between about 3 – 7 μm and the wall thickness of the non-undulating regions is between about 10 – 20 μm .

8. (Previously Cancelled)

9. (Previously Presented) The implantable medical graft according to Claim 2, wherein the at least one of a plurality of suturing openings further comprises a generally cruciform-shaped slot pattern.

10. (Previously Presented) The implantable medical graft according to Claim 1, wherein the at least one of a plurality of microperforations further comprises a generally Y-shaped slot pattern.

11. (Previously Presented) The implantable medical graft according to Claim 1, further comprising at least one of a plurality of radially projecting barb members.

12. (Previously Presented) The implantable medical graft according to Claim 2, further comprising at least one of a plurality of suture members integrally extending along a longitudinal axis of the body member.

13. (Previously Amended) A method of making an implantable medical graft comprising the steps of:

- a. providing a generally cylindrical substrate having a plurality of circumferentially extending continuous undulations defined by a radially undulating pattern of surfaces disposed between longitudinally alternating radially extending peaks and valleys, patterned along at least a portion of a longitudinal axis of the generally cylindrical substrate and at least one of a plurality of non-undulated circumferential regions positioned at the end regions of the substrate;
- b. vacuum depositing a graft-forming material onto the generally cylindrical substrate;
- c. releasing the deposited graft-forming material from the substrate to form a implantable medical graft including circumferential corrugations defined by a radially undulating pattern of longitudinally alternating radially extending peaks and valleys in an abluminal wall surface of the deposited graft-forming material and a radially undulating longitudinally alternating pattern of radially extending peaks and valleys in a luminal wall surface of the deposited graft-forming material, wherein each peak in the luminal surface is longitudinally coincident with each peak in the abluminal surface and each valley in the luminal surface is longitudinally coincident with each valley in the abluminal surface, wherein the peaks and valleys are disposed along at least a portion of the longitudinal axis of the deposited graft-forming material and at least one of a plurality of non-undulated circumferential regions is positioned at the end regions of the deposited graft-forming material; and
- d. forming a plurality of microperforations disposed through ~~the portion of~~ the deposited graft-forming material ~~between~~ forming the coincident peaks and the coincident valleys.

14. (Original) The method according to Claim 13, wherein the graft-forming material is selected from the group consisting of biocompatible metals and pseudometals.

15. (Previously Presented) The method according to Claim 13, further comprising the step of forming at least one of a plurality of suturing openings through the wall thickness of at least one non-undulating region of the deposited graft-forming material.

16. (Previously Cancelled)

17. (Previously Presented) The implantable medical graft according to Claim 1 wherein the circumferential corrugations forming an undulating pattern of peaks and valleys form annular ridges in the body member to permit the implantable medical graft to bend in excess of 180 degrees about the longitudinal axis of the implantable medical graft.

18. (Currently Amended) An implantable medical graft, comprising:

- a. a generally tubular body member comprising a film selected from the group consisting of metallic and pseudometallic materials and having a luminal wall surface, an abluminal wall surface and a thickness intermediate the luminal wall surface and the abluminal wall surface; and
- b. at least a portion of the body member having a plurality of annular ridges defined by a radially undulating pattern of longitudinally alternating radially extending peaks and valleys in the abluminal wall surface of the body member and a radially undulating longitudinally alternating pattern of radially extending peaks and valleys in the luminal wall surface of the body member, wherein each peak in the luminal surface is longitudinally coincident with each peak in the abluminal surface and each valley in the luminal surface is longitudinally coincident with each valley in the abluminal surface, wherein ~~a plurality of microperforations is disposed through the portion of the body member between the~~ the wall thicknesses of the coincident peaks is less than and the wall thicknesses of the coincident valleys, and wherein the proximal and distal ends of the tubular body member include longitudinal regions with annular ridges and other longitudinal regions including no annular ridges to form a staggered array of annular ridged and non-annular ridged regions at the proximal and distal ends of the body member.

19. (Previously Presented) The implantable medical graft according to Claim 18, further comprising a plurality of suturing openings disposed through the wall thickness of the body member at the proximal and distal ends of the body member.

20. (Previously Presented) The implantable medical graft according to Claim 18, wherein the film is made of a metallic material selected from the group consisting of titanium, vanadium, aluminum, nickel, tantalum, zirconium, chromium, silver, gold, silicon, magnesium, niobium, scandium, platinum, cobalt, palladium, manganese, molybdenum and alloys thereof.

21. (Previously Presented) The implantable medical graft according to Claim 2, wherein the at least one of a plurality of suturing openings further comprises a generally Y-shaped slot pattern.

22. (Previously Presented) The implantable medical graft according to Claim 1, wherein the at least one of a plurality of microperforations further comprises a generally elongated slot including terminal fillets on opposing ends of the slot.